

SEQUENCE LISTING

<110> Martinussen, Jan  
Defoor, Els Marie Celine

<120> Orotate Transporter Encoding Marker Genes

<130> 10556.204-US

<160> 22

<170> PatentIn version 3.3

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<223> Orotate transporter encoding ORF

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aat	caa	aat	cca	atc	aat	gcg	gat	tta	cga	aaa	att	ggt	ggc	tca	cca	96
Asn	Gln	Asn	Pro	Ile	Asn	Ala	Asp	Leu	Arg	Lys	Ile	Val	Gly	Ser	Pro	
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ttt	ttg	gcc	tct	gga	att	tcc	aac	ttt	ggt	ggt	tcg	att	ttt	tta	gga	144
Phe	Leu	Ala	Ser	Gly	Ile	Ser	Asn	Phe	Val	Gly	Ser	Ile	Phe	Leu	Gly	
		35					40					45				
att	atc	act	tta	gtg	acc	agt	caa	aca	ctt	ttt	cct	agt	ttt	caa	ttt	192
Ile	Ile	Thr	Leu	Val	Thr	Ser	Gln	Thr	Leu	Phe	Pro	Ser	Phe	Gln	Phe	
		50					55				60					
ggt	ggc	tca	cac	cca	gta	tgg	ata	tgg	att	ggt	ggg	ggt	ctt	ggt	ggg	240
Val	Gly	Ser	His	Pro	Val	Trp	Ile	Trp	Ile	Gly	Gly	Val	Leu	Gly	Gly	
65					70					75				80		
att	ttt	cta	aca	tct	aat	ggt	tta	ctt	ttc	cca	aga	tta	gga	gct	gtc	288
Ile	Phe	Leu	Thr	Ser	Asn	Val	Leu	Leu	Phe	Pro	Arg	Leu	Gly	Ala	Val	
				85				90						95		
caa	acg	gtg	att	tta	cct	att	ttg	ggt	cga	ata	ttg	atg	ggg	aca	ctt	336
Gln	Thr	Val	Ile	Leu	Pro	Ile	Leu	Gly	Arg	Ile	Leu	Met	Gly	Thr	Leu	
			100					105					110			
att	gat	tca	ttt	ggc	tgg	ttt	cat	gcc	atg	caa	ctt	ccg	atg	act	ctg	384
Ile	Asp	Ser	Phe	Gly	Trp	Phe	His	Ala	Met	Gln	Leu	Pro	Met	Thr	Leu	
			115				120					125				

atg cgc ttt ttg gga gtt atc att act tta gct ggg gtt att gtc gcg Met Arg Phe Leu Gly Val Ile Ile Thr Leu Ala Gly Val Ile Val Ala 130 135 140	432
gtt gtt ctt cct aat tta aaa gaa aaa gaa gca gaa acg cac caa act Val Val Leu Pro Asn Leu Lys Glu Lys Glu Ala Glu Thr His Gln Thr 145 150 155 160	480
aac tta cta ggc tgg cga att tgg gcg gtc atc gtt ggg gca atg tcg Asn Leu Leu Gly Trp Arg Ile Trp Ala Val Ile Val Gly Ala Met Ser 165 170 175	528
gct gct caa caa gca att aat ggc aga ttg gga gtt tta ctt gaa aac Ala Ala Gln Gln Ala Ile Asn Gly Arg Leu Gly Val Leu Leu Glu Asn 180 185 190	576
act gca caa gca acc ttt gtt tcg ttc ttc att gga ttt tta gct att Thr Ala Gln Ala Thr Phe Val Ser Phe Phe Ile Gly Phe Leu Ala Ile 195 200 205	624
ttt atc gtg tct ctt ttt att gac cgc cgt ttg cca aaa att tca gaa Phe Ile Val Ser Leu Phe Ile Asp Arg Arg Leu Pro Lys Ile Ser Glu 210 215 220	672
tta aaa aaa gca aaa cct tgg aat gga att ggt gga ttt tta gga gcc Leu Lys Lys Ala Lys Pro Trp Asn Gly Ile Gly Gly Phe Leu Gly Ala 225 230 235 240	720
tca atc gtt ttt gca aca gtc gtt gct gtt ccg caa att ggt gca ggg Ser Ile Val Phe Ala Thr Val Val Ala Val Pro Gln Ile Gly Ala Gly 245 250 255	768
ctg aca att atg atg ggc ttg att gga caa att tta ggc agt atg ttg Leu Thr Ile Met Met Gly Leu Ile Gly Gln Ile Leu Gly Ser Met Leu 260 265 270	816
gtt caa caa ttt ggt tgg tgg cgc tca agt aaa tat ggc att caa att Val Gln Gln Phe Gly Trp Trp Arg Ser Ser Lys Tyr Gly Ile Gln Ile 275 280 285	864
tgg caa att gtt ggg att cta att atg ctg acc gga ata ata ttc att Trp Gln Ile Val Gly Ile Leu Ile Met Leu Thr Gly Ile Ile Phe Ile 290 295 300	912
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Phe Leu Ala Ser Gly Ile Ser Asn Phe Val Gly Ser Ile Phe Leu Gly	35	40	45
Ile Ile Thr Leu Val Thr Ser Gln Thr Leu Phe Pro Ser Phe Gln Phe	50	55	60
Val Gly Ser His Pro Val Trp Ile Trp Ile Gly Gly Val Leu Gly Gly	65	70	75
Ile Phe Leu Thr Ser Asn Val Leu Leu Phe Pro Arg Leu Gly Ala Val	85	90	95
Gln Thr Val Ile Leu Pro Ile Leu Gly Arg Ile Leu Met Gly Thr Leu	100	105	110
Ile Asp Ser Phe Gly Trp Phe His Ala Met Gln Leu Pro Met Thr Leu	115	120	125
Met Arg Phe Leu Gly Val Ile Ile Thr Leu Ala Gly Val Ile Val Ala	130	135	140
Val Val Leu Pro Asn Leu Lys Glu Lys Glu Ala Glu Thr His Gln Thr	145	150	155
Asn Leu Leu Gly Trp Arg Ile Trp Ala Val Ile Val Gly Ala Met Ser	165	170	175
Ala Ala Gln Gln Ala Ile Asn Gly Arg Leu Gly Val Leu Leu Glu Asn	180	185	190
Thr Ala Gln Ala Thr Phe Val Ser Phe Phe Ile Gly Phe Leu Ala Ile	195	200	205
Phe Ile Val Ser Leu Phe Ile Asp Arg Arg Leu Pro Lys Ile Ser Glu	210	215	220
Leu Lys Lys Ala Lys Pro Trp Asn Gly Ile Gly Gly Phe Leu Gly Ala	225	230	235
			240

Ser Ile Val Phe Ala Thr Val Val Ala Val Pro Gln Ile Gly Ala Gly  
245 250 255

Leu Thr Ile Met Met Gly Leu Ile Gly Gln Ile Leu Gly Ser Met Leu  
260 265 270

Val Gln Gln Phe Gly Trp Trp Arg Ser Ser Lys Tyr Gly Ile Gln Ile  
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Trp Gln Ile Val Gly Ile Leu Ile Met Leu Thr Gly Ile Ile Phe Ile  
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Lys Phe Leu  
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